

REMARKS

The claims in the application are 17-21, and 24-39.

Favorable reconsideration of the application as amended is respectfully requested.

As noted above, the Office Action mailed November 3, 2006, was mailed as a Final Action. On December 5, 2005 a Petition To Withdraw Finality of Office Action was mailed. A Decision on Petition was mailed on March 8, 2006, and withdrew the finality of the Office Action. Therefore, this is in response to the action mailed November 3, 2006 made non-final by granting of the Petition.

The Applicants would like to thank the Examiner for acknowledging that claims 20-21, 34 and 37-39 contain allowable subject matter.

Claims 17-19, 24-33 and 35-36 have been rejected under 35 U.S.C. 103(a) as obvious over JP 10-30986 or JP 5-320616 in view of JP 11-178904 (hereinafter referred to as JP '986, JP '616 and JP '904).

As recited in independent Claim 17 present herein, the present invention is directed an indicator for plasma sterilization comprising an ink containing

at least one type of colorless chromogenic fluoran pigment,

a coloring assistant comprising at least one compound having a dithiocarbamyl group, and

a binder for base material,

wherein the indicator is formed to undergo color tone change by hydrogen peroxide low temperature plasma sterilization.

JP '986 is directed to a gaseous substance detecting body and gaseous substance detecting method using the same. In particular, JP '986 includes the use of triphenylmethane phthalides, and flourans as the coloring compound. As described in the present application, triphenylmethane pigment possesses improved stability over previously-used leucocrystal violet pigment, but when applied to base material, is hardly colored when subjected to hydrogen peroxide low temperature plasma sterilization (page 4). As a result of study described on page 5 of the present application, only samples utilizing colorless fluoran pigment in combination with an assistant having a dithiocarbamyl (or alternatively mercapto) group, were found to be clearly colored and stable by hydrogen peroxide low temperature plasma sterilization.

More particularly, as noted on page 17 of the present application, inks prepared according to Examples 1-3 of the present application (Figs. 8-10) colored well upon exposure to sterilization, whereas comparative examples 1-3 omitting the claimed coloring assistant did not change color at all. Inks prepared with another fluoran pigment according to Examples 4-6 (Figs. 11-13) also colored well upon exposure to sterilization, whereas comparative examples 4-6 omitting the claimed coloring assistant also failed to change color at all (page 18). This evidence is also backed up by the comparative testing between Examples 7-12 (Figs. 14-19) and comparative examples 7-12 omitting the claimed coloring assistant, as described on pages 19-20 of the present application.

Successful performance of invention Examples 16-18 (Figs. 23-25) is also described on pages 22-23 of the present application, with excellent performance being attained with the compositions prepared according to Examples 19 and 20 (Figs. 26 and 27) as described

on pages 23-24 of the present application. Comparative examples 16-20 which were identically prepared except by using a pigment other than the claimed fluoran pigment, performed poorly as compared to the claimed compositions (page 27 of the present application).

Accordingly, the comparative testing set forth in the present application clearly documents improvement indicating hydrogen peroxide plasma sterilization with the claimed combination of ingredients, as opposed to comparative compositions which all fail to contain the same combination of claimed ingredients. JP '986 just discloses a composition containing, among other ingredients, a pigment which can be triphenylmethane, fluoran, etc. but without the claimed dithiocarbamyl-containing coloring assistant. In addition, the JP '986 does not teach or discuss the addition of the claimed dithiocarbamyl-containing coloring assistant, nor does it indicate that there is any problems with the composition not containing dithiocarbamyl as a coloring assistant.

Similarly, JP '616 also just discloses a composition containing a color-changing compound which can include a triphenylmethane or fluoran, but no disclosure of the claimed dithiocarbamyl-containing coloring assistant is present. In addition, as with JP '986, JP '616 does not indicate that there is any problem with the composition not containing dithiocarbamyl as a coloring assistant. Therefore, one skilled in the art after reading JP '986 and JP '616 would be satisfied with the compositions taught in these references and would not be driven to change these compositions at all, let alone to include the claimed dithiocarbamyl coloring assistant of JP '904 as suggested by the Examiner.

Moreover, JP '904 does not even include a fluoran-containing pigment as in the presently claimed invention. Instead, the ink in this reference contains a trimethylmethane pigment which is clearly unsatisfactory for the reasons discussed above. Further as stated in previous responses, the indicator of this reference loses color upon sterilization, the exact opposite of the mechanism occurring with the fluoran-containing pigments according to the present invention. Still further, the specific combination of a non-fluoran pigment such as triphenylmethane pigment (Fig. 2) together with other ingredients including the claimed coloring assistant (Comparative Examples 16-20) have been shown to be inferior to the claimed compositions as described on pages 26-27 of the present application.

In view of the foregoing , neither JP '986 nor JP '616 provides any suggestion to add the dithiocarbamyl coloring assistant of the present invention nor do these references provide any reason why one should make the claimed combinations. What JP '986 and/or JP '616 discloses, therefore, is not a "teaching" to add the dithiocarbamyl coloring assistant of the present invention to the JP '986 and/or JP '616 compositions. It is not a teaching or suggestion which would have led one to combine the JP '986 and/or JP '616 compositions with the dithiocarbamyl coloring assistant of JP '904 does. It is not a disclosure which would have "strongly motivated" one to do so. *Ex parte Graselli*, 231 USPQ 393,394 (Bd. App. 1986). It is not the motivation which would have "impelled" one to do so. But that is what a conclusion of obviousness requires. See *Ex parte Levengood*, 28 USPQ2d 1300, 1301-02 (BPAI 1993). As stated above, based on the fact that neither JP '986 nor JP '616 suggests any shortcomings of the disclosed compositions, one would have had no reason to tinker with the JP '986 and/or JP '616 and make a new

Moreover, JP '904, which is later in time to JP '986 and/or JP '616, had JP '986 and/or JP '616 before him, and JP '904 did not include or disclose or otherwise suggest that the dithiocarbaminic compound described by JP '904 be combined with the fluoran pigment described by JP '986 and/or JP '616 to arrive at the present invention. Although it is asserted by the Examiner that such a combination would have been obvious, that combination certainly was not obvious to the inventors of JP'904. In addition, JP '904 did not even teach or suggest the combination of the dithiocarbaminic compound described therein with a non-fluoran pigment, such as the triphenylmethane pigment disclosed by JP'616, even though this would have been equally likely based on the JP'904 disclosure to use the dicarbaminic compound of JP '986 and/or JP '616 with "a pigment" in JP'904. A combination shown to be inferior to the claimed compositions as described on pages 26-27 of the present application. That is further indicia of nonobviousness. *In re Magat*, 112 USPQ 317,319-20 (CCPA 1957); *In re Wiggins*, 158 USPQ 199,202 (CCPA 1968).

Accordingly, it is respectfully submitted the combination of the three-applied references, at most, could only be fashioned in light of the invention disclosure found in the present application, which constitutes improper hindsight reconstruction of the claimed invention.

Therefore, in view of the forgoing remarks, and explicit statements in the Office Action, it is respectfully submitted all claims pending herein are in condition for allowance. Please contact the undersigned attorney should there be any questions. A petition for an automatic three month extension of time for response under 37 C.F.R. 1.136(a) is enclosed in triplicate together with the requisite petition fee.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Leo G. Lenna', written over a horizontal line.

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